

Remarks/Arguments

The Office Action mailed April 30, 2007 has been reviewed and carefully considered.

Claims 1-12 are now pending in this application.

Reconsideration of the above-identified application in view of the following remarks is respectfully requested.

Claims 1-8 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kim (U.S. Patent No. 6,459,203) in view of Vrionis, et al. (U.S. Patent No. 5,397,966) (hereinafter 'Vrionis').

Kim is directed to a backlight apparatus for a liquid crystal display (LCD). Specifically, the components of the backlight described in Kim include a plurality of electrode lamps (2) powered by a plurality of high voltage feed lines (3) (connected to the high voltage electrodes (2b) of the lamp) and a single ground wire (1) (connected to the low voltage electrodes (2a) of the lamp). In addition, the electrode lamps of Kim are enclosed in a housing (6) grounded to a sash of an LCD module via a ground plate (7) (Kim, column 3, lines 40-41). Kim asserts that employing a single ground wire, as opposed to a plurality of ground wires as was known in the prior art, provides a thin-thickness liquid crystal display and allows a device assembler to easily identify and distinguish the plugs through which the supply lines for the lamps are run (Kim, column 3, lines 54-56 & lines 61-67).

Kim fails to disclose or suggest, however, a coaxial screening system enclosing a discharge vessel. As illustrated in Figure 4 of Kim, the discharge vessels (2) do not share

a common axis with the housing (6). In addition, the housing (6) of Kim does not enclose the discharge vessel. Figure 4 of Kim provides a front view of the backlight system showing that the front portion is open (so as to provide light to the liquid crystal display). Accordingly, Kim fails to disclose or remotely suggest a coaxial screening system enclosing a discharge vessel.

Vrionis describes a method and system directed to reducing radio frequency interference radiated from an electrodeless lamp. The gas in a discharge vessel of an electrodeless lamp is excited by an electromagnetic field generated by an induction coil (Vrionis, column 2, lines 3-14). The Vrionis system includes a grounded, light-permeable, electrically conductive wire mesh screen positioned around the discharge vessel of the lamp (Vrionis, Column 4, lines 11-20) (see Vrionis, Fig. 1c) to reduce radio frequency interference emanating from the electrodeless lamp. Vrionis does not disclose or remotely suggest a coaxial screening system enclosing a discharge vessel.

As discussed below, the present principles include a coaxial screening system enclosing a discharge vessel. Generally, the present principles are directed to a system and method for reducing undesired electromagnetic radiation emanating from a gas discharge lamp. In an electrode lamp, the undesired radiation is primarily radiated from the electrodes and supply lines of the lamp (Specification, lines 16-18).

The undesired electromagnetic radiation associated with a gas discharge lamp is directly proportional to a common mode current, which is the difference between the current supplied to the lamp and the current returned from the lamp (see Specification, lines 18-20). Such radiation may be reduced by "recapturing" the common mode current (undesired electromagnetic radiation) via induced currents within a screening enclosing

the source of the radiation (see Specification, p. 9, lines 7-22). Preferably, the screening should be grounded to assist the free flow of induced currents associated with the undesired electromagnetic radiation.

One aspect of the present principles includes a coaxial screening system enclosing a discharge vessel. As can be seen in Figures 2, 4, 5, 7 and 9, the screen system (9) shares a common axis with the discharge vessel (2). The common axis is formed along electrodes (4, 5), around which the screen system is enveloped. Configuring the symmetrical screen system axis along the line formed by the electrodes facilitates the free flow of induced currents corresponding to the undesired electromagnetic radiation.

As discussed above, Kim and Vrionis, taken singly or in combination, do not disclose or suggest a coaxial screening system enclosing a discharge vessel. Thus, the present principles are patentably distinguished from the cited references.

Claim 1 includes, inter alia: “[a] gas discharge lamp with a translucent, electrically conductive screening (9, 23) which screens the discharge vessel (2) and comprises connection means (10, 11, 24, 27, 28) for providing an at least high-frequency connection between the screening (9, 23) and a screening (14, 17, 19) of an electrical system used for operating the gas discharge lamp (1) so as to form a coaxial screening system enclosing the discharge vessel (2) with the electrodes (4, 5) during operation of the gas discharge lamp (1).”

Accordingly, claim 1 is believed to be patentable over Kim and Veronis, taken singly or in combination, at least because the references fail to disclose or suggest a coaxial screening system enclosing a discharge vessel. In addition, claims 2-12 are also

patentable due at least to their dependencies from claim 1. However, other reasons exist for allowing the dependent claims.

For example, according to one aspect of the present principles, the discharge vessel of the lamp, in which the electrodes are located, is enclosed within a translucent, electrically conductive screen (Specification, element 9, Fig. 8) that is coupled to a screening of the electrical system, which is at ground potential (19). This particular embodiment is economical, as a separate screen supply line is not necessary (Specification, p. 4, lines 24-2). The screen (9) in this embodiment serves as an extension of supply line or return line (16) to power an electrode (5) via a suitable contact (27) (Specification, p.11, lines 3-16).

Kim and Vrionis, taken singly or in combination, fail to teach or suggest using a screen as a supply line for a gas discharge lamp.

As stated above, the housing for the discharge vessel of Kim is grounded to a sash of an LCD module. Kim does not disclose or suggest that the housing in any way serves as a power supply line. Moreover, contrary to the examiner's assertions otherwise, the ground wire (1) is not a screen that acts as a supply line. As described above, a screen encloses electrical components to provide a shield for undesired electromagnetic radiation. The ground wire of Kim does not enclose any electrical components nor does it shield any electromagnetic radiation. Accordingly, Kim fails to disclose or suggest a screening that serves as a supply line to the electrodes.

Moreover, Vrionis does not disclose or remotely suggest a screening that serves as a supply line to electrodes. First, the lamp of Vrionis does not include any electrodes.

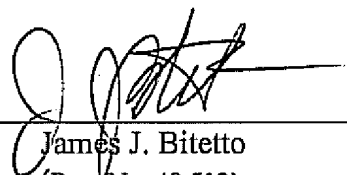
Second, the screening of Vrionis is not a supply line to the induction coil, nor does Vrionis in any way suggest that it may serve as a supply line.

Claim 7 includes, inter alia: “[a] gas discharge lamp . . . characterized in that the screening (9) of the gas discharge lamp (1) serves as a supply line and is electrically connected to one of the electrodes (5).” Accordingly, claim 7 is believed to be patentable over Kim and Vrionis, taken singly or in combination, at least because the references fail to teach or suggest a screening that serves as a supply line.

In view of the foregoing, the applicants respectfully request that the rejections of the claims set forth in the Office Action of April 30, 2007 be withdrawn, that pending claims 1-12 be allowed, and that the case proceed to early issuance of Letters Patent in due course.

It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to applicant’s representatives Deposit Account No. 50-1433.

Respectfully submitted,

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